REMARKS

Claims 77-98 remain pending in the application. Applicant thanks the Examiner for the courtesy extended in the personal interview with applicant's representative on December 1, 2005. As a result of the issues discussed during the interview, the claims have been amended to more explicitly distinguish the present invention from the applied prior art references. Further reconsideration of this application is requested.

Rejection over Munk

Claims 77, 79, 86 and 88 stand rejected as being anticipated by Munk, USPN 4,667,465. It was explained at the interview that the Munk system does not increase the pressure of the gas turbine subsystem input airstream above atmospheric pressure as ambient temperature increases. It was pointed out that increasing the input airstream pressure above atmospheric pressure as claimed, requires air to be added to the system. In contrast, Munk teaches the reduction of excess air. Munk states at col. 3, ll. 1-3 that "[e]xcess air is diminished as fog vapor displaces excess air at input to the combustion chamber. Less excess air results in less NOx formation".

Munk teaches the use of an ultrasonic fog generator to inject a fog into the input air of a combustion chamber, to reduce noxious emissions in the exhaust and improve the efficiency of the combustion. From Munk's express statement and from the stated purpose of Munk's invention, it is clear that the "forced draft of air" provided by blower 160 is used merely to convey the fog vapor into the combustion chamber 170, and not to increase mass flow (i.e., to add to excess air), which is the opposite of the effect of the present invention as claimed.

Further, Munk fails to disclose a fogger to humidify and cool the input airstream as claimed. Contrary to the limitations of the present claims, Munk discloses heating coils 190A-190B that use exhaust gas heat to preheat the input air. See col. 4, ll. 5-10.

Still further, Munk does not disclose a variable supercharging system that variably increases the pressure of the gas turbine subsystem input airstream as ambient

temperature increases over an operating temperature range of said gas turbine system, as recited in the claims as amended. Support for this amendment is found from Figs. 7A – 9 and the accompanying disclosure at pages 18-22 of the specification.

Rejection over Foster-Pegg

As reviewed during the interview, Foster-Pegg fails to disclose or suggest a gas turbine system having a supercharging subsystem and at least one fogger located upstream of a gas turbine subsystem input airstream. Foster Pegg is concerned with deep chilling or evaporative cooling (e.g., use of media to cool air by dripping water on 'cardboard' and allowing it to evaporate). Nowhere does Foster-Pegg disclose fogging.

Further, Foster-Pegg also fails to disclose variable supercharging as set forth in the claims as amended. Variable supercharging over the operating temperature range of the gas turbine system as claimed, achieves the benefit of improving the power output over such temperature range to close to maximum rated output, as shown in Fig. 6 of the application. In contrast, Foster-Pegg fails to disclose this feature. The supercharging taught by Foster-Pegg does not improve the power output as achieved by the invention as claimed, but rather only shifts the power curve up as noted by the Examiner in the Interview Summary record. In other words, while more power would be produced at each temperature by supercharging in accord with Foster-Pegg, the amount of power still decreases as ambient temperature rises, thus suffering from the same shortcomings in the prior art that are solved by the present claimed invention.

Rejection over Bronicki et al.

As explained during the interview, Bronicki refers to spray operations that drop water into the air stream and thereby cool it. No mention of small particle size or entraining the mist or fog into the air is found in the reference. The concept of capturing the water and recycling it that is taught in the reference indicates that Bronicki essentially teaches against fogging. Fogging, conversely, uses high pressure to create a fine mist in which

water vapor in entrained in the air stream and does not form pools of water. Bronicki's use of the term cooler has no context beyond the specific techniques that are related in the disclosure, since in its broadest use, would include deep chilling.

Further, Bronicki also fails to disclose a variable supercharging system that variably increases the pressure of the gas turbine subsystem input airstream as ambient temperature increases over an operating temperature range of said gas turbine system, as recited in the claims as amended.

Rejection over Kolp et al.

Kolp, described at page 3 of the present application, generally discloses the effects of inlet temperature and pressure on the performance of a gas turbine; unlike the present invention as claimed, Kolp fails to disclose a variable supercharging system as discussed above. As explained at the interview, the multiple curves shown in the charts provided by Kolp represent separate and distinct system configurations, and not variable operation of a single system configuration, as set forth in the present claims.

Rejection over Craig (USP No. 3,500,636)

As discussed during the interview, Craig is primarily concerned with marine propulsion systems, in particular to a gas turbine plant for delivering mechanical shaft power to a ship propeller such as, for example, would be attached to the final drive shaft 7 attached to gearbox 6 as shown in Fig. 1. While Craig does mention electricity generation, such is contemplated only in the context of an auxiliary steam turbine generator making use of the heat from the gas turbine exhaust. See col. 2, ll. 2-8; col. 6, ll. 28-31.

The objective of Craig is to maintain the efficiency of the gas turbine when delivering power at part-loads to be on the same order as when delivering power at full load. See col. 2, ll. 57-60. Craig discloses that Tmax, the temperature of the air at the inlet to the

gas turbine 4, is to be kept constant by varying the mass flow through operation of low pressure compressor 1.

Consequently, Craig is seen to be directed to maintenance of gas turbine efficiency at varying loads, whereas the present invention as claimed is directed to maintaining full output power over varying ambient temperature ranges. Craig does not disclose a variable supercharging system that variably increases the pressure of the gas turbine subsystem input airstream as ambient temperature increases over an operating temperature range of said gas turbine system, as recited in the claims as amended.

Rejection over EPRI Article

The EPRI article discloses a "Spray Cooler" for a combustion turbine. The "Spray Cooler" is an evaporative cooler with direct water spray and an additional overspray for intercooling of a compressor. EPRI does not disclose fogging, does not disclose supercharging, does not disclose variable supercharging, and as such no combination of EPRI with either Kolp and/or Craig would cure the deficiencies of those prior art references as discussed above with respect to the claimed invention.

Conclusion

In view of the foregoing amendment and remarks, further and favorable reconsideration of this application, withdrawal of all outstanding grounds of rejection, and the issuance of a Notice of Allowance are earnestly solicited.

RESPECTFULLY SUBMITTED,			
NAME AND REG. NUMBER	Vincent M. DeLuca Attorney for Applicant Reg. No. 32,408		
SIGNATURE	Vincent M DeLuca	DATE	9 DEC 05

Address	Novak, Druce, DeLuca & Quigg LLP 1300 I Street, N.W. Suite 400 East Tower				
City	Washington	*State*	D.C.	*Zip Code*	20005
Country	U.S.A.	*Telephone*	202-659-0100	*Fax*	202-659-0105